

IN THE CLAIMS

1 (Previously Presented). An apparatus comprising:
a dielectric layer;
an adhesion layer comprising hemispheric grain polysilicon overlying the dielectric layer; and
a phase-change material overlying the adhesion layer.

2 (Previously Presented). The apparatus of claim 1, wherein the adhesion layer is on the dielectric layer.

3 (Original). The apparatus of claim 1, wherein the phase-change material is on the adhesion layer.

4 (Original). The apparatus of claim 1, wherein the adhesion layer consists essentially of silicon.

5 (Original). The apparatus of claim 1, wherein the adhesion layer comprises at least forty percent silicon atoms by weight.

Claim 6 (Canceled).

7 (Original). The apparatus of claim 1, wherein the adhesion layer comprises three dimensional grains.

Claims 8-10 (Canceled).

11 (Previously Presented). An apparatus comprising:
an adhesion layer comprising silicon having a rough surface; and
a phase-change material on the adhesion layer.

Claim 12 (Canceled).

13 (Previously Presented). The apparatus of claim 11, wherein the adhesion layer comprises hemispherical grain polysilicon.

14 (Original). The apparatus of claim 11, wherein the adhesion layer has a surface comprising bumps having an average height of at least 30 Angstroms.

15 (Original). The apparatus of claim 11, further comprising a dielectric layer, wherein the adhesion layer is on the dielectric layer.

16 (Original). The apparatus of claim 15, wherein the dielectric layer comprises silicon dioxide or silicon nitride.

17 (Original). The apparatus of claim 11, wherein the phase-change material comprises a chalcogenide alloys.

18 (Original). The apparatus of claim 17, wherein the phase-change material comprises GeSbTe alloys.

19 (Currently Amended). A method comprising:

forming an interfacial layer having hemispheric ~~three-dimensional~~ grains; and
forming a phase-change material over said interfacial layer.

20 (Original). The method of claim 19, wherein forming an interfacial layer includes forming an interfacial layer over an insulator.

Claim 21 (Canceled).

22 (Original). The method of claim 19 wherein forming an interfacial layer includes forming a layer comprising silicon.

23 (Original). The method of claim 19 further including forming the interfacial layer over a layer of dielectric material.

24 (Previously Presented). The method of claim 23 further including forming an opening through said interfacial layer and said dielectric material.

25 (Original). The method of claim 24 further including forming the phase-change material over the interfacial layer and in the opening.

26 (Previously Presented). An apparatus comprising:
an adhesion layer having bumps of at least 30 Angstroms; and
a chalcogenide phase-change material on said adhesion layer.

27 (Previously Presented). The apparatus of claim 26 wherein said adhesion layer includes silicon.

28 (Previously Presented). The apparatus of claim 26 wherein said adhesion layer comprises hemispherical grain polysilicon.

29 (Previously Presented). An apparatus comprising:
an adhesion layer having bumps of at least 30 Angstroms;
a dielectric layer, said adhesion layer on the dielectric layer; and
a phase-change material on the adhesion layer.

30 (Previously Presented). The apparatus of claim 29 wherein said adhesion layer includes silicon.

31 (Previously Presented). The apparatus of claim 29 wherein said adhesion layer comprises hemispherical grain polysilicon.

32 (Previously Presented). The apparatus of claim 26 wherein said adhesion layer includes polysilicon.

33 (Previously Presented). The apparatus of claim 29 wherein said adhesion layer includes polysilicon.